

REMARKS

Upon entry of the amendments in this paper, claims 1-4, 6-11, 14, 15 and 17-21 will be pending in the above identified application. No new matter is entered. It is respectfully submitted that this paper is fully responsive to the Office action mailed on December 16, 2010.

Claim Rejections - 35 U.S.C. §103

Claims 1-2, 6, 8-10 and 21 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Publication No. 2004/0223466 to *Schrader et al.* in view of U.S. Publication No. 2004/0179469 to *Attar et al.* further in view of AAPA (Fig. 1 and Page 2, line 2 – Page 3, line 5).

Applicants respectfully disagree with the Office Action's characterization of pending claims and cited references. Applicants request favorable reconsideration of these claims in view of the following remarks.

First, the Office Action impermissibly uses claim 1 as a blue-print to reconstruct claim 1. "One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to duplicate the claimed invention." *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988). The system described in *Schrader* does not include *non-cyclic* data communications. Plus, neither *Schrader*, nor ATTAR discloses a system for controlling/monitoring an *industrial plant*. Therefore, even assuming that the combination of SA meets all of the limitations except those allegedly disclosed in AAPA, it would not be obvious to control an industrial plant with the SA system. As acknowledge in the background section of this

application (AAPA), large-scale industrial applications have different operational characteristics than conventional applications (e.g., those described in SA).

Second, even if one were to combine the references, the result would not be the claimed invention. The combination of *Schrader* and ATTAR does not disclose assigning the set of communication stations, the time-synchronous communication, the non-cycle data communication and the cycle data communication to each of the time slots, as recited in claim 1. For example, even if ATTAR does describe a form of non-cycle data communication in paragraph [0062] (please confirm), it doesn't necessarily follow that the combination of references (SA) would assign this type of information along with the other information to each of the time slots. To do so, the *Schrader* system would have to be redesigned.

Third, in the Office Action, the Examiner asserts the claimed timer section and time-synchronous communication section are disclosed in Fig. 3 and paragraphs [0020], [0029] of *Schrader*. Further, the Examiner asserts that Fig. 1a and paragraphs [0020]-[0021] and [0027] of *Schrader* teach that when the time-synchronous communication section transmits a time-synchronous communication frame to each communication station, time of the timer section of each communication and the time slots of all communication stations are synchronized. However, Applicants disagree with the above assertions for at least the following reasons.

Schrader merely discloses transmitting a master synchronization message, but is completely silent about that time of the timer section of each communication is synchronized.

For example, paragraph 0012 of *Schrader* describes "synchronization broadcast, by assigning a slot number ("k"), and a cycle number "j" for that slots and the maximum number of

cycles "M(k)" for that time slot." That is, a signal concerning time synchronization is not included in the synchronization broadcast disclosed in *Schrader*.

Accordingly, Schrader does not disclose the time synchronization as required by claim 1.

Plus, *Schrader* does not disclose that each of the communication station has a timer section, as required by claim 1.

Fourth, in ATTAR, a data structure of the time slot is set as shown in Fig.2.

Whereas, in the presently claimed invention, the time-division multiplex communication section is configured to perform communication within the time slot.

For example, while the presently claimed invention describes performing communication within the time slot as shown in Fig. 8, ATTAR does not describe performing communication within the time slot. As described above, ATTAR merely describes a data structure of the time slot. Furthermore, as is clear from the disclosure of ATTAR, the concept of the time slot in ATTAR is different from the concept of the time slot defined in the present invention.

Fifth, ATTAR describes timing synchronization of the access points and access terminals in paragraphs [0098] and [135]. Namely, ATTAR fails to disclose time synchronization, a required by claim 1. Although ATTAR does not describe how the timing synchronization is achieved, in general, the timing synchronization can be achieved by introducing a synchronization code in a communication signal. Meanwhile, regarding the time synchronization, *it is necessary to send time data in order to achieve the time synchronization.*

Thus, the timing synchronization is different from the time synchronization. ATTAR teaches away from the replacement of the timing synchronization with the time synchronizations.

Also, in the timing synchronization, it is necessary to always adjust the timing to achieve the timing synchronization, which results in the increase in data traffic. Whereas, in the time synchronization, it is not necessary to always adjust the timing while it is necessary to adjust the time, which results in the decrease in the data traffic as compared with the timing synchronization.

Moreover, in a plant operation control, the plant control is performed using the time. Thus, the communication timing synchronization enables synchronization of the communication itself, but cannot perform the synchronization between the control timing and the communication timing. Meanwhile, the time synchronization can perform the synchronization between the control timing and the communication timing, leading to the improvement of plant control.

Accordingly, Applicants submit that claim 1 is patentable over the above combination of references.

Also, claims 2, 6, 8-10 and 21 are likewise patentable over the above combination of references by nature of dependency from claim 1.

Claims 3-4 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *SAA* as applied to claim 1 above further in view of U.S. Publication No. 2003/0110435 to *Wu et al.*

Claims 7, 11, 14 and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *SAA* as applied to claim 1 above in view of U.S. Patent No. 6,021,124 to *Haarsten*, further in view of U.S. Publication No. 2004/0062278 to *Hadzic et al.*

Claims 17-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *SAA* as applied in claim 1 above in view of U.S. Patent No. 5,541,919 to *Yong et al.*

Claims 3-4, 7, 11, 14, 15, and 17-20 depend from independent claim 1. These claims are likewise patentable over the cited combination of references in view of the aforementioned remarks distinguishing claim 1.

Conclusion

In view of the aforementioned remarks, Applicants submit that the claims are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

/DARRIN A. AUITO/

Darrin A. Auito
Attorney for Applicants
Registration No. 56,024
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

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